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DOCUMENT-IDENTIFIER: US 6025126 A
TITLE: Methods and compositions for the detection of chromosomal aberrations

BSPR:
An upper limit on probe size for purposes of the present invention is believed to be about 200 kb of nucleic acids, that is, about 3 times the size used in the examples disclosed herein. A goal in determining suitable sizes for probes is to detect doublets. Doublets are pairs of distinct probes in closer proximity than expected based on there normal chromosome locations in the absence of aberrations. To overcome limitations inherent in some other techniques, this invention provides a strategy of multiple sorties into the genetic material using at least two probes for separate, but related sequences; for example, one for each of the flanking regions of a breakpoint at which fusion of two chromosomal segments has occurred. Moreover, this invention takes advantage of probes large enough to give an intense signal yet specifically targeted to a genomic sequence. To be distinguishable yet juxtaposed at interphase, labelled flanking regions have to be approximately within 800 kb.